



Norman H. Bangertter
Governor
Dee C. Hansen
Executive Director
Robert L. Morgan
State Engineer

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RIGHTS

1636 West North Temple, Suite 220
Salt Lake City, Utah 84116-3156
801-538-7240

November 8, 1988

M/053/005
ut 20917

Tenneco Minerals Co.
P.O. Box 2650
St. George, UT 84770

Re: Regulating Reservoir Applications - 88R195, 88R196, 88R197, 88R198

Gentlemen:

We have approved the above-referenced applications subject to the following conditions. In the case of Application 88R195, this letter will also serve as official notice of our waiver of the need for plans and specifications, pursuant to Section 73-5-5 of the Utah Code Annotated 1953.

1. Any storage of water in the reservoirs created is subject to all vested water rights in your area.
2. All design and construction activities undertaken shall be commensurate with state-of-the-art standards.
3. Notification of the inspector and contractor for the projects shall be submitted to this office prior to the beginning of any construction.
4. All inspector's journals and results of material testing performed during construction should be submitted to this office.

Copies of your approved applications are included for your future reference. If you have any questions or need further clarification, please feel free to contact me or Gerald Stoker of our Cedar area office.

Sincerely,

Richard B. Hall, P.E.
Directing Dam Safety Engineer

RBH/cp

cc: Gerald Stoker, Cedar Area Engineer

RECEIVED

APR 23 1991

DIVISION OF
OIL GAS & MINING

Tenneco Minerals

A Tenneco Company

P.O. Box 2650
St. George, Utah 84770
(801) 673-1606



RECEIVED
November 11, 1988

NOV 15 1988

WATER RESOURCES
SALT LAKE

Mr. Richard B. Hall, P.E.
Directing Dam Safety Engineer
Department of Natural Resources
Division of Water Rights
1636 West North Temple, Suite 220
Salt Lake City, Utah 84116-3156

Dear Mr. Hall:

Pursuant your letter of approval dated November 8, 1988 Tenneco wishes to notify you of the inspector and contractor for the ponds and dam construction. Through our oversight we need to inform you that the ponds construction is nearly completed. The clay and HDPE liner systems are all that remain in these structures. The dam has yet to be built. The information provided is:

- A) Inspector: George Toland, P.E.
2558 South 550
East, Bountiful, Utah 84010.
- B) Contractor: Lost Dutchman Construction Co.
Inc., 1475 east Greg Street,
Sparks, Nevada 89431.

I want to sincerely apologize for not providing this information sooner as you have requested. If I can provide any additional information please contact me at (801) 673-1606.

Sincerely,

Ken Kluksdahl

Mine Manager

KK:dj

6/88 RECEIVED

APPLICATION TO CONSTRUCT A DAM IMPOUNDING LESS THAN 20 ACRE-FEET

RECEIVED

OCT 07 1988

OCT 31 1988
WATER RIGHTS
SALT LAKE

STATE OF UTAH

WATER RIGHTS
SALT LAKE

Application No. 88R195
Received 11-8-88
Entered _____

The following application is submitted, pursuant to Section 73-5-12 of the Utah Code Annotated 1953, to obtain the authority to build a dam which will create a reservoir impounding less than 20 acre-feet.

1. APPLICANT INFORMATIONName(s): Tenneco Minerals CompanyAddress: P.O. Box 2650City: St. GeorgeState: UtahZip Code: 84770**2. PURPOSE OF DAM**

Stock Pond _____

Regulating Res. _____

Diversion Dam _____

Irrigation _____

Debris Basin _____

Flood Control _____

Sedimentation x _____

Tailings Pond _____

Recreation _____

Other (describe) _____

3. LOCATION OF DAMCounty WashingtonQuarter/Quarter (i.e. NESW) NESection 20Township 39SRange 18WBase & Meridian SLB & M**4. PROPOSED DAM**Dam Height (vertical distance) 40 feetCrest Length (length of top of dam) 360 feetCrest Width (width of top of dam) 65 feetUpstream slope 1 vertical on 3 horizontalDownstream slope 1 vertical on 1 1/2 horizontalWater surface area at spillway crest 1.93 acresReservoir capacity at spillway crest 21.3 ac.ft.Type of dam (i.e. earthfill, concrete, etc.) Earthfill**5. PROPOSED OUTLET**

Inside diameter _____ inches Length _____ feet

Type of pipe (i.e. concrete, steel, etc.) _____

Type of gate or valve _____

Location of gate (upstream, downstream, center, etc.) _____

6. PROPOSED SPILLWAYCrest Length (width of bottom of spillway) 12 feetDepth (from bottom of spillway to top of dam) 4 feetType (i.e. earth channel, pipe, etc.) Bedrock ChannelControl (i.e. gates, flashboards, etc.) NONE

Small Dam

7. WATER RIGHTS

Describe (see instructions) Will not hold water.

8. COMMENTS

For silt control only

9. PLANS

Attach any plans sketches or diagrams which will clarify the information given on this application.

The undersigned acknowledge they have read the instructions included with this application, and are aware no construction is to begin until this application has been approved by the Utah State Engineer.

10-26-88
Date

Ken A. Whitaker
Signature of Applicant

Water Rights in Order By NA Date November 4, 1988
Area Engineer's Hazard Rating Moderate
Reviewed by Dam Safety By _____ Date _____
Comments _____

Date of Approval

November 8, 1988

Robert L. Morgan
Robert L. Morgan, P.E.
For State Engineer

RECEIVED

OCT 31 1988

APPLICATION TO CONSTRUCT
A DAM IMPOUNDING LESS
THAN 20 ACRE-FEET. 1988

WATER RIGHTS
SALT LAKE

STATE OF UTAH

WATER RIGHTS
SALT LAKE

Application No. 88R19
Received 11-8-88
Entered _____

The following application is submitted, pursuant to Section 73-5-12 of the Utah Code Annotated 1953, to obtain the authority to build a dam which will create a reservoir impounding less than 20 acre-feet.

1. APPLICANT INFORMATION

Name(s): Tenneco Minerals Company
Address: P.O. Box 2650
City: St. George State: Utah Zip Code: 84770

2. PURPOSE OF DAM

Stock Pond _____ Regulating Res. _____ Diversion Dam _____
Irrigation _____ Debris Basin _____ Flood Control _____
Sedimentation _____ Tailings Pond _____ Recreation _____
Other (describe) Pregnant Solution Pond

3. LOCATION OF DAM

County Washington Quarter/Quarter (i.e. NESW) NE Section 20
Township 39S Range 18W Base & Meridian SLB&M

4. PROPOSED DAM

Dam Height (vertical distance) 15 feet
Crest Length (length of top of dam) 600 feet
Crest Width (width of top of dam) 15 feet
Upstream slope 1 vertical on 3 horizontal
Downstream slope 1 vertical on 2 horizontal
Water surface area at spillway crest 0.4 acres
Reservoir capacity at spillway crest 3.0 ac.ft.
Type of dam (i.e. earthfill, concrete, etc.) Earthfill

5. PROPOSED OUTLET

Inside diameter _____ inches Length _____ feet
Type of pipe (i.e. concrete, steel, etc.) _____
Type of gate or valve _____
Location of gate (upstream, downstream, center, etc.) _____

6. PROPOSED SPILLWAY

Crest Length (width of bottom of spillway) 2 feet
Depth (from bottom of spillway to top of dam) 3 feet
Type (i.e. earth channel, pipe, etc.) Pipe

Control (i.e. gates, flashboards, etc.) NONE

Small Dam

7. WATER RIGHTS

Describe (see instructions) Process Solution

8. COMMENTS

9. PLANS

Attach any plans sketches or diagrams which will clarify the information given on this application.

The undersigned acknowledge they have read the instructions included with this application, and are aware no construction is to begin until this application has been approved by the Utah State Engineer.

10-26-88
Date

Ken A. Kibben
Signature of Applicant

Water Rights in Order By NA Date November 4, 1988
Area Engineer's Hazard Rating Low
Reviewed by Dam Safety By _____ Date _____
Comments _____

Date of Approval November 8, 1988

Robert L. Morgan
For Robert L. Morgan, P.E.
State Engineer

RECEIVED

APPLICATION TO CONSTRUCT
A DAM IMPOUNDING LESS
THAN 20 ACRE-FEET

OCT 8 1988

STATE OF UTAH

NOV 01 1988

WATER RIGHTS
SALT LAKE

WATER RIGHTS
SALT LAKE

Application No. 88R 197
Received 11-8-88
Entered _____

The following application is submitted, pursuant to Section 73-5-12 of the Utah Code Annotated 1953, to obtain the authority to build a dam which will create a reservoir impounding less than 20 acre-feet.

1. APPLICANT INFORMATION

Name(s): Tenneco Minerals Company
Address: P.O. Box 2650
City: St. George State: Utah Zip Code: 84770

2. PURPOSE OF DAM

Stock Pond _____ Regulating Res. _____ Diversion Dam _____
Irrigation _____ Debris Basin _____ Flood Control _____
Sedimentation _____ Tailings Pond _____ Recreation _____
Other (describe) Barren Solution Pond

3. LOCATION OF DAM

County Washington Quarter/Quarter (i.e. NESW) NE Section 20
Township 39S Range 18W Base & Meridian SLB & M

4. PROPOSED DAM

Dam Height (vertical distance) 15 feet
Crest Length (length of top of dam) 600 feet
Crest Width (width of top of dam) 15 feet
Upstream slope 1 vertical on 3 horizontal
Downstream slope 1 vertical on 2 horizontal
Water surface area at spillway crest 0.4 acres
Reservoir capacity at spillway crest 3.0 ac.ft.
Type of dam (i.e. earthfill, concrete, etc.) Earthfill

5. PROPOSED OUTLET

Inside diameter _____ inches Length _____ feet
Type of pipe (i.e. concrete, steel, etc.) _____
Type of gate or valve _____
Location of gate (upstream, downstream, center, etc.) _____

6. PROPOSED SPILLWAY

Crest Length (width of bottom of spillway) 2 feet
Depth (from bottom of spillway to top of dam) 3 feet
Type (i.e. earth channel, pipe, etc.) Pipe
Control (i.e. gates, flashboards, etc.) None

Small Dam

7. WATER RIGHTS

Describe (see instructions) Process Solution

8. COMMENTS

9. PLANS

Attach any plans sketches or diagrams which will clarify the information given on this application.

The undersigned acknowledge they have read the instructions included with this application, and are aware no construction is to begin until this application has been approved by the Utah State Engineer.

10-26-88
Date

Ken A. Kuhnelt
Signature of Applicant

Water Rights in Order By WA [Signature]

Date November 4, 1988

Area Engineer's Hazard Rating _____

Reviewed by Dam Safety By _____

Date _____

Comments _____

Date of Approval November 8, 1988

Robert L. Morgan
For Robert L. Morgan, P.E.
State Engineer

RECEIVED

APPLICATION TO CONSTRUCT
A DAM IMPOUNDING LESS
THAN 20 ACRE-FEET

1988

OCT 9 - 1988

WATER RIGHTS
SALT LAKE

STATE OF UTAH

WATER RIGHTS
SALT LAKE

Application No. 882198
Received 11-8-88
Entered _____

The following application is submitted, pursuant to Section 73-5-12 of the Utah Code Annotated 1953, to obtain the authority to build a dam which will create a reservoir impounding less than 20 acre-feet.

1. APPLICANT INFORMATION

Name(s): Tenneco Minerals Company
Address: P.O. Box 2650
City: St. George State: Utah Zip Code: 84770

2. PURPOSE OF DAM

Stock Pond _____ Regulating Res. _____ Diversion Dam _____
Irrigation _____ Debris Basin _____ Flood Control _____
Sedimentation _____ Tailings Pond _____ Recreation _____
Other (describe) water pond

3. LOCATION OF DAM

County Washington Quarter/Quarter (i.e. NESW) NE Section 20
Township 39S Range 18W Base & Meridian SLB&M

4. PROPOSED DAM

Dam Height (vertical distance) 15 feet
Crest Length (length of top of dam) 600 feet
Crest Width (width of top of dam) 15 feet
Upstream slope 1 vertical on 3 horizontal
Downstream slope 1 vertical on 2 horizontal
Water surface area at spillway crest 0.4 acres
Reservoir capacity at spillway crest 3.0 ac.ft.
Type of dam (i.e. earthfill, concrete, etc.) Earthfill

5. PROPOSED OUTLET

Inside diameter _____ inches Length _____ feet
Type of pipe (i.e. concrete, steel, etc.) _____
Type of gate or valve _____
Location of gate (upstream, downstream, center, etc.) N O N E

6. PROPOSED SPILLWAY

Crest Length (width of bottom of spillway) 2 feet
Depth (from bottom of spillway to top of dam) 3 feet
Type (i.e. earth channel, pipe, etc.) pipe
Control (i.e. gates, flashboards, etc.) NONE

Small Dam

7. WATER RIGHTS

Describe (see instructions) Process water

8. COMMENTS

9. PLANS

Attach any plans sketches or diagrams which will clarify the information given on this application.

The undersigned acknowledge they have read the instructions included with this application, and are aware no construction is to begin until this application has been approved by the Utah State Engineer.

10-26-88

Date

Ken A. [Signature]
Signature of Applicant

Water Rights in Order By *OKC [Signature]* Date *November 14, 1988*

Area Engineer's Hazard Rating *Low*

Reviewed by Dam Safety By _____ Date _____

Comments _____

Date of Approval *November 8, 1988*

Robert L. Morgan
Robert L. Morgan, P.E.
For State Engineer